

横断山区莎草科新分类群 (二)

李沛琼*

(中国科学院植物研究所, 北京100044)

NEW TAXA OF THE CYPERACEAE FROM HENGDUAN MOUNTAINS (2)

Li Peichun

(Institute of Botany, Academia Sinica, Beijing 100044)

关键词 莎草科; 苔草属; 新分类群

Key Words Cyperaceae; *Carex*; New taxa

近年来, 作者在承担《横断山区植物》一书莎草科的编著中, 鉴定了中国科学院青藏综合科学考察队在横断山采集到莎草科标本以及我所标本馆收藏该科部分标本, 发现了一些新分类群, 现在本文发表¹⁾。

苔草属 *Carex* L.

柄囊苔草 新种 图1

Carex stipitiutriculata P. C. Li, sp. nov.

(Sect. *Capitellatae*)

Affinis *C. oniei* Franch., quae foliis planis, utriculis demum divaricatis, breviter stipitatis, brevirostris differt.

Rhizoma caespitosum. Culmus 5—8 cm altus, setaceus leavis ad basim vaginis clare brunneis vestitus. Folia culmo longiora, stacea canaliculata. Spicula 1 terminalis, androgyna oblonga, 5 mm longa, pauci-(4—6—) et subdensiflora, pars ♂ inconspicua 2-flora. Squamae ♀ oblongo-lanceolatae, 3.5—4.2mm longae, ferrugineae, dorso virides trinerviae, acuminatae. Utriculi squamas paullo superan-

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*作者现在地址: 深圳518004, 深圳植物园。

1) 本文单位代号E, PE及未注明单位代号的标本均藏我所标本馆。

tes, demum erectiusculi, lanceolato-oblongi, 4.5—5 mm longi, virelli, glabri nervosi, membranacei, longe stipitati, apice in rostrum longum ore hylinum oblique sectum sensim attenuati. Nux anguste oblonga trigona. Styli basis leviter incrassata. Stigmata 3.

Yunnan (云南): Weixi (维西), mons Biloshan (碧罗山), alt. 3600 m, in Paludibus alpinis, 13 Jul 1981, Exped. Hengduanshan. Inst. Bot. (植物所横断山队) 1531 (Holotypus PE).

本种与针叶苔草 *C. onoei* Franch. et Sav. 接近, 但后者的叶扁平, 果囊成熟后开展, 具短柄和短喙可与本种区别。

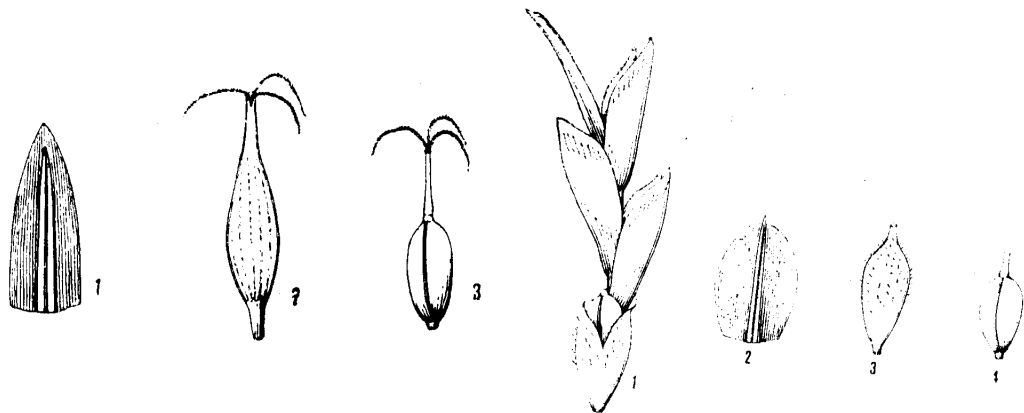


图1 柄囊苔草 *Carex stipitiutriculata* P. C. Li,
1. 鳞片; 2. 果囊; 3. 小坚果。(吴彰桦绘)

图2 玉龙苔草 *Carex yulungshanensis* P. C. Li
1. 顶生小穗基部的一枚分枝小穗; 2. 鳞片;
3. 果囊; 4. 小坚果。(吴彰桦绘)

玉龙苔草 新种 图2

Carex yulungshanensis P. C. Li, sp. nov

(Sect. *Mundae*)

Affinis *C. fragilis* Boott, quae spiculis lateralibus androgynis, laxifloris, squamis ♀ rufescentibus, utriculis longi-rostribus differt.

Rhizoma crassum caespitosum. Culmus ad 50 cm altus, gracilis laevis, basi vaginis atro-fuscis obtectus. Folia culmo breviora, linearis convoluta vel plana 1—2 mm lata. Spiculae 5—6, cylindricae, 3—4 cm longae, 3—4 mm latae, terminalis androgyna, basi ramulo ex utriculo fertili enato instrata, laterales ♀ (interdum apice breviter ♂), remotae singulae, densiflorae, longe exserte capillari-pedunculatae, ima subbasialis, ad basin 3—5 ramosa. Bracteae breviter foliaceae, longe vaginantes. Squamae ♀ oblongae, 3.5—4 mm longae, purpureo-fuscae, dorso virides trinerviae, scaberulae, apice subrotundatae mucronatae margine albo-hyalinae. Utriculi obovato-lanceolati, 3.5—4 mm longi, complano-trigoni, stramineo-viridi, pubescentes envervii, basi in stipitem brevem, apice in rostrum

mediocre conicum leviter excurvum ore truncatum subsinim attenuati. Nux ovato-oblonga, 2.2 mm longa. Styli basis incrassata. Stigmata 3.

Yunnan (云南): Lijiang (丽江), mons Yulongshan (玉龙山), Xuehai (雪海), alt. 3900—4250 m, in pratis alpini et in delivitatibus glarearum, 28 Jul. 1981, Exped. Hengduanshan. Inst. Bot. (植物所横断山队) 2091 (Holotypus PE).

本种接近 *C. fragilis* Boott, 惟后者之侧生小穗雄雌顺序, 具疏生的花, 雌花鳞片淡褐红色, 果囊具长喙可与本种区别。

马库苔草 新种 图 3

Carex makuensis P. C. Li, sp. nov.

(Sect. *Acutae-Praelongae*)

Smilis *C. prescottianae* Boott, quae utriculis late ovatis, bracteis brevioribus differt.

Rhizoma ligosum. Culmus 30—40 cm altus, glacilis sed rigidus. Folia culmum subaequantia, 4—5 mm lata, plana, coriacea ad basin vaginis aphyllis brunneo-rubris circumdatus. Spiculac 5, superiores approximatae, brevius pedunculatae, ima remota longius pedunculata, erectae vel cernuae, terminalis ♂, lineari-cylindrica, laterales ♀, cylindricae, 2.5—4 cm longae, 3.5—4 mm latae, densiflorae. Bracteae foliaceae, inflorescentiam multo superantes, ima vaginatae. Squamae ♀ oblongae, 1.7—2.2 mm longae, fuscae, apice plerumque subrotundatae vel emarginatae dorso virides, trinervae apice aristatae. Utriculi longiores quam squamae, anguste oblongi, 2.7—3.5 mm longi, brunnei chartacei, biconvexi, demum turgidi, purpureo-punctulati, nervosi, basi rotundati vix stipitati, apice in rostrum brevissimum subintegrum contracti. Nux elliptica vel obovato-elliptica, 1.7—2.3 mm longa. Styli basis subaequalis. Stigmata 2.

Yunnan (云南): Gongshan Xian (贡山县), Dulungjing (独龙江), Maku (马库), alt. 1400 m, in arenosum prope rivolos, 9 Aug. 1982, Exped. Qinghai-Xizang. (青藏队) 9148 (Holotypus PE)

本种与 *C. prescottiana* Boott 接近, 惟后者果囊宽卵形, 苞片短, 可与前者区别。

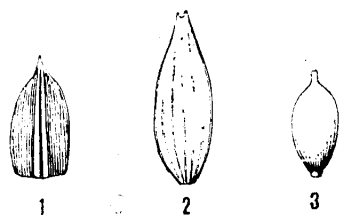


图3 马库苔草 *Carex makuensis* P. C. Li,
1. 鳞片; 2. 果囊; 3. 小坚果。(吴彩桦绘)

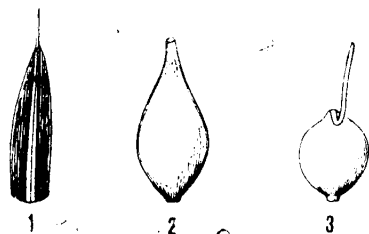


图4 高黎贡苔草 *Carex goligongshanensis* P. C. Li,
1. 鳞片; 2. 果囊; 3. 小坚果。(吴彩桦绘)

高黎贡苔草 新种 图4***Carex goligongshanensis* P. C. Li, sp. nov.**(Sect. *Acutae-Praelongae*)

Smilis C. cernuae Boott, quae spiculis longioribus, utriculis late ovatis, dense papilloso-purpurco-granulosis, squamis obovato-oblongis, emarginatis, pallide ferrugineis differt.

Rhizoma caespitosum. Culmus gracilis, 40—60 cm altus, papillosus, ad basin vaginis aphyllis, fusco-brunneis obtectus. Folia culmo breviora, 3—5 mm longa, plana, subtus papillosa. Spiculae 4—5, gynaeandreae, basi floribus ♂ paucis instructae, oblongae vel oblongo-cylindricae, 1.5—3 cm longae, 5—6 mm latae, subdensiflorae, superiores 3—4 approximatae, inferiores 1 remotae, longius capillaceo-pedunculatae cernuae. Bracteae foliaceae, culmum longe superantes, ima breviter vaginatae. Squamae ♀ lanceolatae, 2.8—3 mm longae, acuminatae, atropurpureae, dorso virides trinervae, apice in aristam longam validam hispidam excurrentes. Utriculi squamis longiores et latiores, membranacei, longe ovati, 3—3.5 mm longi, flavo-virides, biconvexi, vix papilloso, enervi, basi subrotundati, breviter stipitati, marginati, apice in rostrum breve, ore integrum attenuati. Nux obovata vel subrotundata, 1.8—1.9 mm longa. Styli basis aequalis, flexuosis. Stigmata 2.

Yunnan (云南): Gongshan Xian (贡山县), Mons Goligongshan (高黎贡山), oriens clivus, alt. 3600 m, in fruticibus prati alpini, 24 July 1982, Exped. Qinghai-Xizang. (青藏队) 8727 (Holotypus PE).

本种与俯垂苔草 *C. cernuae* Boott 接近, 惟后者小穗较长, 果囊宽卵形, 具乳头状突起和紫色点, 雌花鳞片倒卵状长圆形, 微凹, 淡锈色与本种可以区别。

多雄苔草 新种 图5***Carex polymascula* P. C. Li, sp. nov.**(Sect. *Atratae*)

Affinis *C. atatae* L. subsp. *pullata* (Boott) Kükenth. quae spiculis terminalibus 1 gynaeandris, utriculis oblongis, squamis brevioribus differ.

Rhizoma stoloniferum. Culmus 60—70 cm altus, rigidulus, superne scaber, basi vaginis brunneis obtectus. Folia culmo breviora, 3—4 mm lata, plana, submollia, subtus papillosa. Spiculae 5—7, subfastigiatae, ima subremotae, clavato-cylindricae, 2.5—3.6 cm longae, 6—7 mm latae, densiflorae, cernuae, superiores 3—4 ♂ (raro basi breviter ♀), caeterae ♀, plerumque apice breviter ♂ vel ima mere ♀, superiores brevius inferiores longius pedunculatae, pedunculi setacei, dense papilloso. Bracteae superiores squamiformes, inferiores subfoliaceae, evaginant. Squamae ♀ oblongo-lanceolatae, 4—4.5 mm longae, atropurpureae vel fuscae, margine hyalinae viridi-carinatae, mucronatae. Utriculi squamis breviores, complanati papyracei, subrotundati vel late ovati, compresso-trigoni, 2.3—2.5 mm longi,

brunneoli, purpureo-punctati, glabri, enervii, basi brevissime stipitati apice in rostrum brevissimum, ore hyalinum leviter emarginatum abrupte contracti. Nux utriculo multo minor, elliptica, breviter stipitata. Styli basis aequalis. Stigmata 3.

Sichuan (四川): Xiangcheng (乡城), Mons Wumingshan (无名山), alt. 3800 m, in abietetis, 7 Aug. 1983, Grup. Veget. Exped. Qinghai-Xizang. (青藏队植被组), 4855 (Holotypus PE); codem loco, alt. 4200 m, in declivitatibus, 7 Aug. 1983, Lang Kai-yong (郎楷永), Li Liang-qian (李良千) et Fei Yong (费勇) 2639.

本种与黑被苔草 *C. atrata* L. subsp. *pullata* (Boott) Kükenth. 接近, 惟后者顶生 1 枚小穗雌雄顺序, 果囊长圆形, 鳞片短可与本种区别。

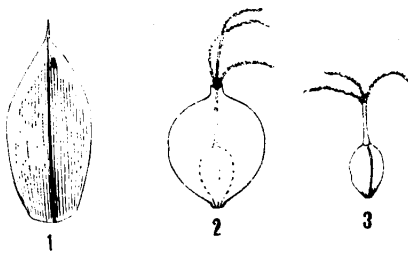


图5 多雄苔草 *Carex polymascula* P. C. Li,
1. 鳞片; 2. 果囊; 3. 小坚果。(吴彩桦绘)

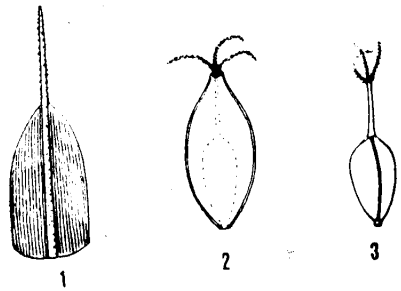


图6 长芒苔草 *Carex aristulifera* P. C. Li,
1. 鳞片; 2. 果囊; 3. 小坚果。(吴彩桦绘)

长芒苔草 新种 图6

Carex aristulifera P. C. Li, sp. nov.

(Sect. *Atrata*)

Affinis *C. atratae* L. subsp. *pullatae* (Boott) Kükenth. quae spiculis terminalis gynaeandris, lateralis ♀, squamis apice haud longe aristatis differt.

Rhizoma caespitosum. Culmus 15—30 cm altus, pergracilis, apice cernuus, triquetus, dense punctatus, basi vaginis aphyllis atrofusces obtektus. Folia culmo breviora, 1.5—2 mm lata, plana supra dense punctata, subtus papillosa, ad marginem saepe hispida. Spiculae 2—3, gynaeandrae, partibus ♂ longitudine 1/3 spiculae aequantibus, approximatae vel ima remotiuscula oblongae, 1—2 cm longae, 5 mm latae, capillari-pedunculatae, densiflorae, cernuae. Bractae setaeae, inflorescentiae breviores, breviter vaginantes. Squamae ♀ oblongae, 2.8—3.2 mm longae, atro-purpureae, dorso virides trinerviae, dense punctatae, apice subrotundatae, longe scabro-aristatae. Utriculi squamis paullo longiores, elliptici, compresso-trigoni, 3.2—3.5 mm longi, membranacei, flavo-virides, superne dense punctati, basi breviter stipitati, apice in rostrum breve integrum contracti. Nux utriculo multo minor, obovato-oblonga, trigona breviter stipitata. Styli basis aequalis. Stigmata 3.

Yunnan (云南): Gongshan Xian (贡山县), Mons Gaoligongshan (高黎贡山), Doshaofang (东哨房), ad rupes in fruticibus prati alpini, alt. 3500 m, 24 July 1982, Exped. Qinghai-Xiznag. (青藏队) 8539 (Holotypus PE).

本种与黑被苔草 *C. atrata* L. subsp. *pullata* (Boott) Kükenth. 接近, 惟后者顶生小穗雌雄顺序, 侧生的雌性; 鳞片顶端无长芒可与本种区别。

蜈蚣苔草 新种 图 7

Carex scolopendrifformis Wang et Tang, sp. nov. in herb.

(Sect. *Mitratae*)

Affinis *C. capilliformis* Franch., quae utriculis ellipticis praeter carinas prominentes enerviis, basi in stipitem obliquum attenuatis differt.

Rhizoma stoloniferum. Culmus 15—40 cm altus, gracilissimus mollis, basi vaginis vetustis atro-brunneis obtectus. Folia culmum subaequantia, filamentosa mollis. Spiculae 2, terminalis ♂, linearis 1.2—1.3 cm longa 1 mm lata pedunculata, lateralis ♀ oblonga 5—6 mm longa laxa 2—3-flora pedunculata. Bractae subpathaceae, setaceo-laminiferae. Squamae ♀ subovatae, 2.4—2.6 mm longae, fuscae, margine albo-hyalinae, viridi-carinatae, acuminatae mucronatae. Utriculi squamas superantes, late ovati, 3.5—3.6 mm longi, inflato-trigoni, viridi-brunnei, hirtuli nervosi basi in breve stipitem abrupte contracti, apice in rostrum mediocre conicum, ore hyalinum oblique sectum subabrupte constricti. Nux arcte inclusa, late obovata, fulva, 1.8 mm longa. Styli basis pyramidalis. Stigmata 3.

Yunnan (云南): Lijiang (丽江), mons Yulungshan (玉龙山), alt. 2850 m, in pratis sub pinctis, 5 Aug. 1981, Exped. Hengduanshan. Inst. Bot. (植物所横断山队) 2677 (Holotypus PE); Zhongdian (中甸), prope urbem, alt. 3300 m in loco humidis declivatatum, 13 Aug. 1962, Exped. Zhongdian (中甸队) 725.

本种接近丝状苔草 *C. capilliformis* Franch., 但后者果囊椭圆形, 除具脊外, 无脉, 基部渐狭成柄。

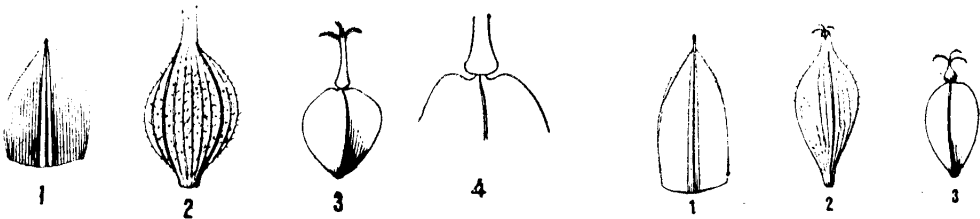


图 7 蜈蚣苔草 *Carex scolopendrifformis* Wang et Tang 1. 鳞片; 2. 果囊; 3. 小坚果; 4. 示花柱基与小坚果之间的连接点。(吴彰桦绘)

图 8 绿头苔草 *Carex chlorocephala* Wang et Tang. 1. 鳞片; 2. 果囊; 3. 小坚果。(吴彰桦绘)

绿头苔草 新种 图 8

Carex chlorocephalula Wang et Tang, sp. nov. in herb.

(Sect. *Digitatae-Radicales*)

Affinis *C. radicali* Boott, quae culmis et foliis glabris, spiculis ovatis differt.

Rhizoma caespitosum. Culmus 6—30 cm altus, gracilis, dense hirsutus, ad basim vaginis vetustis atro-brunneis obtectus. Folia culmum subaequantia, plana, 1.5—3 mm lata, utrinque dense leviter hirsuta, margine leviter levoluta. Spiculae 1—3, oblongae, 1—1.5 cm longae, androgynae vel laterales mere ♀, pauci-et subdensiflorae, remotae, ima subbasilis, longe pedunculata; pedunculi dense hirsuti. Bractae foliaceae, inflorescentia breviores, vaginantes, dense hirsutae. Squamae ♀ oblongae, 3.4—3.6 mm longae, stramineo-virides trinerviae, glabrae vel ciliatae, acuminatae, mucronatae. Utriculi squamis breviores, subrecti, subcoriacei obovato-elliptici, trigonii, 4 mm longi, virides, multinervi, nervis 2 lateralibus prominentibus percursi, hirsuti, margine ciliati, basi in stipitem attenuati, apice in rostrum breve contracti. Nux obovato-elliptica, 2 mm longa. Stylus brevis valde incrassatus, globosus. Stigmata 3.

Yunnan (云南): Dali (大理); Mons Cangshan (苍山), alt. 2930 m, in declivitatibus, Chen Mu (陈谋), 2836 (Holotypus PE); Lijiang (丽江), alt. 2500 m, in pinetis, 15 Oct. 1983, Exped. Qinhai-Xizang. (青藏队) 14985; Jingdong (景东), mons Wuliangshan (无量山), alt. 2350 m, in aridis declivitatibus, Qiu Bin-yun (邱炳云) 53657.

本种接近根穗苔草 *C. radicalis* Boott, 但后者茎与叶无毛, 小穗卵形可与本种区别。

启无苔草 新种 图 9

Carex chiwuana Wang et Tang, sp. nov. in herb.

(Sect. *Digitatae*)

Affinis *C. laetae* Boott, quae foliis angustioribus, utriculis minoribus (3 mm longis), rostris brevissimis differt.

Rhizoma caespitosum. Culmus 18—30 cm altus, gracilis, rigidulus. Folia culmo multo breviora, plana 3—5 mm lata, rigidula, vaginis inferioribus atro-fuscis. Spiculae 3—5, terminalis ♂, oblonga, 1.2—1.3 cm longa, laterales 2—4 ♀, cylindricae, 2—3 cm longae, 4 mm latae, pluri-et subdensiflorae, suprema spicula ♂ approximata, caeterae remotae, longe pedunculatae. Bractae longe vaginantes, breviter laminiferae. Squamae ♀ oblongae, 3.8—4.2 mm longae, atro-brunneae, dorso virides, trinerviae, apice truncatae velemarginatae, mucronatae. Utriculi squamis paullo longiores, obovato-oblongi, 4—4.2 mm longi, obtuse trigoni, fulvo-virides, hirtelli, enervi, nervis 2 lateralibus prominentibus percursi, basi in stipitem longum attenuati, apice in rostrum mediocre conicum, ore hyalinum,

oblique truncatum attenuati. Nux obovato-oblonga, 2.1—2.5 mm longa. Styli basis incrassata. Stigmata 3.

Yunnan (云南): Lijiang (丽江), alt. 2800 m, in declivitatibus, Jul. 1935, C. W. Wang (王启无) 71006 (Holotypus PE); Zhongtian (中甸), alt. 3600 m, in laricetis, 15 Jun. 1981, Exped. Qinghai-Xizang. (青藏队) 1109.

本种接近明亮苔草 *C. laeta* Boott, 但后者叶较狭, 果囊小 (长仅 3 mm), 喙极短可与本种区别。

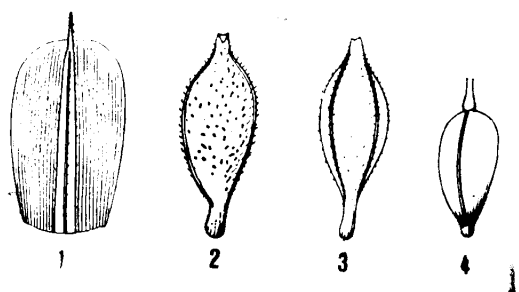


图9 启无苔草 *Carex chiwuana* Wang et Tang,

1. 鳞片; 2. 果囊之腹面; 3. 果囊之背面;
4. 小坚果。(吴彰桦绘)

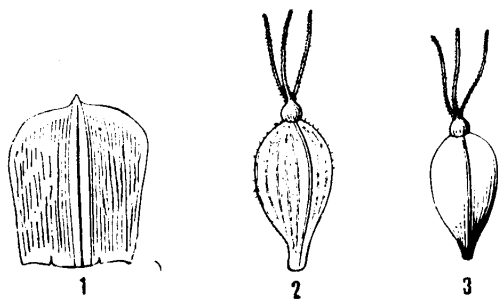


图10 球柱苔草 *Carex globistylota* P. C. Li,

1. 鳞片; 2. 果囊; 3. 小坚果。(吴彰桦绘)

球柱苔草 新种 图10

Carex globistylota P. C. Li, sp. nov.

(Sect. *Digidate*)

Affinis *C. laetae* Boott, quae utriculis enerviis, stylis cylindricis differt.

Rhizoma crassum caespitosum. Culmus 40—60 cm altus valde gracilis, ad basin vaginis vetustis atro-fuscis obtectus. Folia culmo breviora 1—2 mm lata, plana vel canaliculata, supra aspera. Spiculae 3, terminalis ♂ 2—3 cm longa, longe pedunculata, laterales 2 ♀ remotae, ima subbasialis, cylindrica 1.8—3 cm longae 2 mm latae pluri-et subtaxiflorae longe pedunculatae; pedunculi 10 cm longi filimentosi, imi ad 20 cm longi. Bracteae breviter foliaceae longe vaginantes. Squamae ♀ oblongae, 3 mm longae, fusco-purpureae, dorso virides trinerviae apice truncatae vel emarginatae mucronatae, margine late albohyla-linae. Utriculi squamas subaequantes, obovato-oblongi, obtuse trigoni, 3 mm longi, pallide virides, hirtelli plurinervii nervis 2 lateralibus ciliatis prominentibus percursi; basi in stipitem longum attenuati, apice suberostri. Nux arcte inclusa, obovato-oblonga 2 mm longa. Stylus drevis, incrassatus globosus exsertus. Stigmata 3.

Sichuan (四川): Xiangcheng (乡城), Rawu (热乌), alt. 4300—4400 m, in rupibus declivitatibus, 15 Aug. 1981, Exped. Qinghai-Xizang. (青藏队) 4087 (Holotypus PE).

本种与明亮苔草 (*C. lacta* Boott) 近接, 区别在于后者果囊无脉, 花柱圆柱形。

火炉山苔草 新种 图11

Carex huolushanensis P. C. Li, sp. nov.

(Sect. *Digitatae*)

Affinis *C. laetae* Boott, quae utriculis pubescentibus minoribus differt.

Rhizoma orassum dense caespitosum. Culmus 15—40 cm altus, gracilis, ad basin vaginis vetustis ator-fuscis obtectus. Folia culmo breviora, plana 1—3 mm lata, margine scaberula. Spiculae 3—4, cylindricae 1—4 cm longae, 2—3 mm latae, terminalis ♂, laterales ♀, suprema spicula ♂ subapproximata, caeterae remotae, pecunculatae, desiflorae basi laxiores. Bractae laminiferae, longe vaginantes. Squamae ♀ oblongae, 4—5 mm longae, atropurpureae, marginie late albo-hyalinae, dorso scaberulae virides trinerviae apice truncatae vel emarginatae mucronatae. Utriculi squamis breviores, obovato-oblongi, obtuse trigoni, 4 mm longi, pallide virides glabri enervosi, nervis 2 lateralibus hirsutis prominentibus percursi, basi in stipitem longum attenuati, apice in rostrum breve submarginatum apiculati. Nux obovato-oblonga, 2—5 mm longa, arcte inclusa. Styli basis incrassata. Stigmata 3.

Sichuan (四川): Yanyuan (盐源), Huolushan (火炉山), alt. 4000 m, in fruticibus prati alpini, 23 July 1983, Exped. Qinghai-Xizang. (青藏队) 12302 (Holotypus PE); eodeum loco, alt. 3900 m, in fruticibus prati alpini, 22 July 1983, Exped. Qinghai-Xizang. 12285.

本种与明亮苔草 *C. laetae* Boott 接近, 惟后者果囊被短柔毛, 较小可与本种区别。

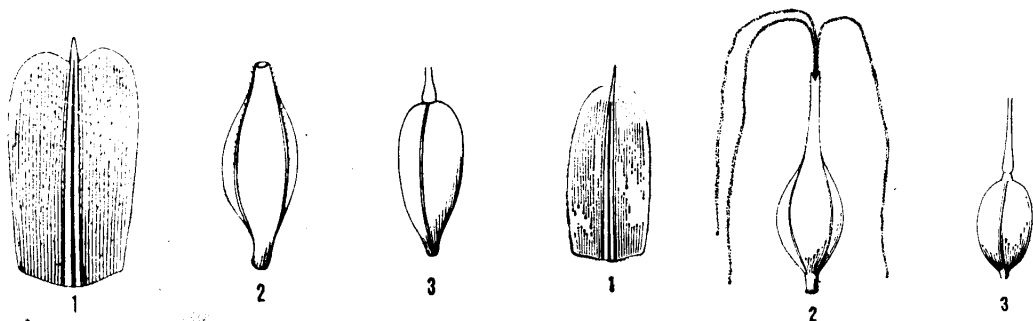


图11 火炉山苔草 *Carex huolushanensis* P. C. Li,
1. 鳞片; 2. 果囊; 3. 小坚果。(吴影桦绘)

图12 百坡山苔草 *Carex baiposhanensis* P. C. Li,
1. 鳞片; 2. 果囊; 3. 小坚果。(吴影桦绘)

百坡山苔草 新种 图12

Carex baiposhanensis P. C. Li sp. nov.

(Sect. *Frigidae*)

Similis *C. decorae* Boott, quae utriculis subsessilibus ore truncatis, stigmatibus

brevioribus differt.

Rhizoma lignosum, stoloniferum. Culmus 40—50 cm altus, gracilis, ad basin vaginis rubro-brunneis obtectus. Folia culmum subaequantia, 5—7 mm lata, plana, supra aspera. Spiculae numerosae, 2—5-nae in fasciculos 5—6, remotos dispositae, superiores 3—6 ♂, inferiores ♀ una apice floribus ♂ instructa, lineari-cylindricae, 2—3.5 cm longae, laxiflorae, inaequaliter longe pedunculatae; pedunculi capillares. Bractae foliaceae, inflorescentiam superantes, longe vaginatae. Squamae ♀ oblongae, 4.5—5 mm longae, sanguineae, margine late hyalinae, dorso flavo-virides, trinerviae, apice subrotundatae vel emarginatae, breviter aristatae. Utriculi squamas vix superantes, membranacei, ovatorhombici, 5—7 mm longi, trigoni, virides, glabri, obsolete nervosi, nervis 2 lateralibus prominentibus percursi, basi breviter stipitati, apice in rostrum longum, margine scabrum, ore leviter bidentulum attenuati. Nux elliptica, brunnea, 2.8—3 mm longa. Styli basis incrassata. Stigmata 3 longissima.

Sichuan (四川): Miyi (米易), Mons Baiposhan (百坡山), alt. 2900 m, in pinetis, 6 July 1983, Exped. Qinghai-Xizang. (青藏队) 11795. (Holotypus PE).

本种与美观苔草 *C. decora* Boott 接近, 惟后者果囊几无柄, 喙口截形, 柱头短可与前者相区别。

双柱苔草 新种 图13

Carex neodigyna P. C. Li, sp. nov.

(Sect. *Frigidae-Fuliginesae*)

Affinis *C. digynae* (Kükenth.) Wang et Tang quae stolonibus nullis, utriculis hispidulis, nucibus ellipticis differt.

Rhizoma caespitosum et stoloniferum. Culmus 8—13 cm altus, firmus, ad basin vaginis aphyllis fuscis obtectus. Folia culmo breviora, 3—4 mm lata, plana, rigidulae. Spiculae 4—5, approximatae vel ima subbasialis, superiores 1—3 ♂, ceterae ♀ ovatae, 1—1.5 cm longae, 6—7 mm latae, densiflorae, breviter pedunculatae. Bractae breviter foliaceae, inflorescentia breviores, evaginantes. Squamae ♀ oblongae, 4.3—4.6 mm longae, brunneae, glabrae, acuminatae margine late albo-hyalinae, ad carinam virides. Utriculi squamas subaequantes, oblongi, inferne albi, superne fusci, subcompressi biconvexi papyracei glabri enervi, basi in stipitem brevem contracti, margine hispiduli, apice in rostrum longum, ore oblique sectum demum bidentulum sensim attenuati. Nux subrotundata, 1.9—2.1 mm longa. Styli basis aeouelis, superne villosi. Stigmata 2.

Sichuan (四川): Sertar Xian (色达县), in fruticibus prati alpini, alt. 3900 m, 7 Sept. 1933, Tang Zhong-xiao (汤宗孝) 1899 (Holotypus PE).

本种与红棕苔草 *C. digyna* (Kükenth.) Wang et Tang 亲缘, 惟后者无匍匐根

状茎，果囊被短粗毛，小坚果长圆形可以与本种区别。

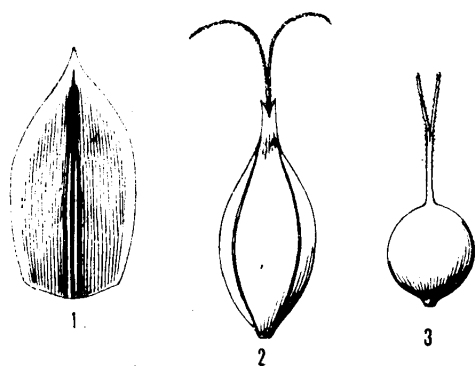


图13 双柱苔草 *Carex neodigyna* P. C. Li,
1. 鳞片； 2. 果囊； 3. 小坚果。（吴彰桦绘）

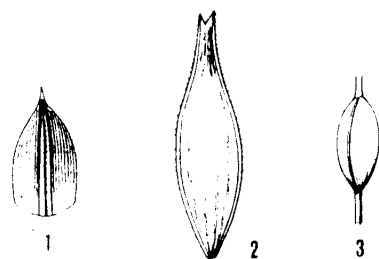


图14 贡嘎苔草 *Carex gonggaensis* P. C. Li,
1. 鳞片； 2. 果囊； 3. 小坚果。（吴彰桦绘）

贡嘎苔草 新种 图14

Carex gonggaensis P. C. Li, sp. nov.

(Sect. *Frigidae-Ferrugineae*)

Affinis *C. nakaoanae* T. Koyama, quae spiculis paucioribus (4—6), superioribus 2—3 ♂, utriculis latoribus differt.

Rhizoma caespitosum. Culmus 25—35 cm altus, gracilis obtuse triqueter rigidulus laevis, ad basin vaginis vetustis brunneis vestitus. Folia culmo breviora, linearia 1—2 mm lata, plana mollia. Spiculae 7—13, superiores fastigiatae, brevius pedunculatae, inferiores remotiusculae, longius pedunculatae interdum ima subbasialis et ramosa, lineares, 2—3 cm longae, 1.5—2 mm latae, terminalis 1 ♂, laterales ♀, subdensi-basin versus laxiflorae erectae. Bractae inferiores foliaceae, inflorescentia breviores vaginatae, superiores squamiformes. Squamae ♀ ovato-oblongae, 1.8—2.5 mm longae, dorso virides, ad carinam scabrae, mucronatae. Utriculi anguste oblongi 4—4.8 mm longi, stramineo-virides, paucinervi compresso-trigoni glabri, basi longe attenuati, apice in rostrum longum, ore hyalinum oblique sectum, demum bidentatum sensim attenuati. Nux anguste oblonga, basi longe stipitata. Styli basis vix incrassata. Stigmata 3.

Sichuan (四川) : Luding (泸定), Mons Gongga Shan (贡嘎山), propr Daozaicong (倒栽冲), alt 3350 m, in declivitatibus, 30 Jun. 1982, Lang Kai-yong (郎楷永), Li Liang-qian (李良千) et Fei Yong (费勇) 352 (Holotypus PE) eodeum loco, alt. 2500—2800 m, in locis humidis prope rivulos, 25 Jun. 1982, Lang Kai-yong, Li Liang-qian et Fei yong 221, eodeum loco alt. 3350 m, in pratis alpinis, 30 Jun. 1982, Lang Kai-yong, Li Liang-qian et Fei yong 318.

本种接近 *C. nakaoana* T. Koyama, 但后者小穗较少 (4—6 枚), 上部的 2—3 枚小穗雄性, 果囊较宽可与本种区别。

日东苔草 新种 图15**Carex ridongensis** P. C. Li, sp. nov.(Sect. *Frigidae-Ferrugineae*)

Affinis *C. drepanorhyncha* Franch., quae spiculis remotis, pedunculis leviter brevioribus (10—15 cm longis), utriculis longe stipitibus differt.

Rhizoma lignosum obliquum caespitosum. Culmus 70—80 cm altus gracilis, ad basim vaginis aphyllis atrofusis obtectus. Folia culmo breviora, 2—3 mm lata plana aspera. Spiculae 4 distantes, cylindricae, 3.5—4 cm longae 3—4 mm latae, terminalis ♂, laterales ♀ subdensiflorae cernuae, pedunculi ad 15—21 cm longi. Bracteae breviter foliaceae, longe vaginantes. Squamae ♀ oblongae, 3.2—3.5 mm longae, fuscae dorse virides trinerviae mucronatae. Utriculi squamas superantes, stramineo-virides, obovato-oblongi, 4.2—4.5 mm longi, trigoni hispidi enervi, basi in stipitem brevem attenuati, apice in rostrum longum brunneum ore hyalinum leviter bidentatum contracti. Nux obovato-oblonga 2 mm longa. Styli basis leviter incrassata. Stigmata 3.

Xizang (西藏): Zayu Xian (察隅县), Ridong (日东), in fruticibus prati alpini, alt. 3500—4000 m, 8 Sept. 1982. Exped. Qinghai-Xizang. (青藏队) 10145 (Holotypus PE).

本种接近镰喙苔草 *C. drepanorhyncha* Franch., 但后者小穗疏远, 小穗梗稍短 (5—12 cm 长), 果囊具长柄可与本种区别。

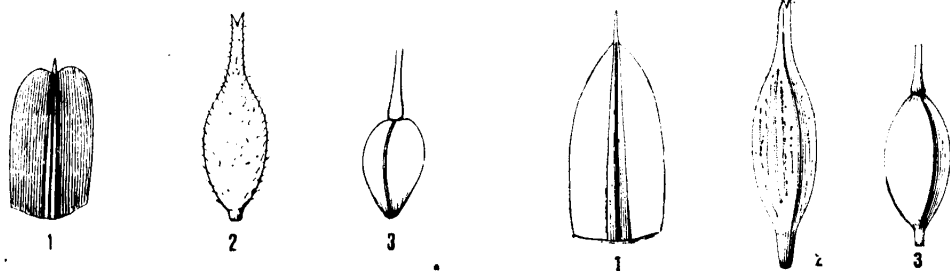


图15 日东苔草 *Carex ridongensis* P. C. Li,
1. 鳞片; 2. 果囊; 3. 小坚果。(吴彰桦绘)

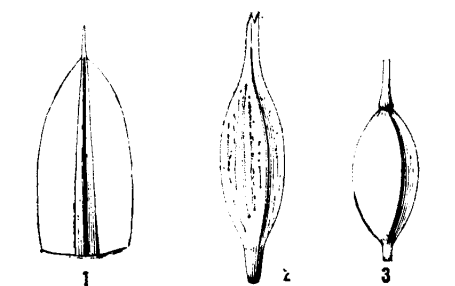


图16 沟囊苔草 *Carex canaliculata* P. C. Li,
1. 鳞片; 2. 果囊; 3. 小坚果。(吴彰桦绘)

沟囊苔草 新种 图16**Carex canaliculata** P. C. Li, sp. nov.(Sect. *Rhomboides*)

Affinis *C. giralduanae* Kükenth. quae vaginis brunneis, utriculis conspicue multinerviis, rostris brevioribus, nucibus apice dilatato-annulatis differt.

Rhizoma stolones longos tenues emittens. Culmus 18—30 cm altus, pergracilis laevis, basi foliatus. Folia culmo longiores, plana, 4—6 mm lata, vaginae clare purpureae,

Spiculae 3; distantes, terminalis ♂ cylindrica, 1.5—2 cm longa, pedunculata; caeterae ♀ ovatae, 7—12 mm longae, pauci-et densiflorae, incluse pedunculatae. Bracteae spathaceae, longevaginant, breviter laminiferae. Squamae ♀ oblongae, 5—5.5 mm longae, albae dorso virides tricostatae, apice subrotundatae mucronatae. Utriculi oblongi, trigoni, 7—7.5 mm longi, subcoriacei, virides, subtus nervosi supra laxe pubescentes, basi longistipitati, apice in longirostrum bidentulum sunsim attenuati. Nux arcte inclusa, elliptica, 4 mm longa, ventralibus canaliculata, lateribus leviter excavata, basi longe stipitata. Styli basis pyramidalis. Stigmata 3.

Yunnan (云南): Weixi (维西), Weideng (维登), Xinghua (新化), alt. 2500 m, sub deciduis latifoliis sylvis, in declivitatibus, 19 May 1981, Exped. Qinghai-Xizang. (青藏队) 6584 (Holotypus).

本种与涝峪苔草 *C. giraladianae* Kükenth. 接近, 但后者叶鞘褐色, 果囊具多数明显之脉, 喙较短, 小坚果顶端膨大呈环状可与本种区别。

云岭苔草 新种 图17

Carex yunlingensis P. C. Li, sp. nov.

(Sect. *Rhomboides*)

Affinis *C. simulanti* Clarke, quae bracteis brevioribus, spicula terminali ♂, spiculis lateraribus ♀, cylindricis, nucibus brunneis differt.

Rhizoma caespitosum. Culmus 30—40 cm altus, pergracilis, laevis, basi vaginis atro-brunneis circumdatus. Folia culmum subaequantia, plana, 4—5 mm lata. Spiculae 3—5, distantes oblongae 2—2.5 cm longae 6—7 mm latae pauci-et laxiflorae, terminalis androgyna, laterales ♀ (apice saepe breviter ♂), incluse pedunculatae. Bracteae foliaceae, inflorescentiam longe superantes, vaginantes. Squamae ♀ oblongo-lanceolatae, 4.5—5 mm longae albae, dorso virides trinerviae apice in aristam perlongam scabram productae. Utriculi rhombi-oblongi, 8—9 mm longi, turgido-trigoni, pallido brunneo-olivacei, nervosi glabri, basi breviter stipitati, apice in rostrum longum, margine scabrum ore profunde bidentatum abrupte contracti. Nux obovato-oblonga, 3.2 mm longa, glauca, breviter stipitata, lateribus inferne concava, apice in collum breve abrupte contracta. Styli basis subincrassata. Stigmata 3.

Yunnan (云南): Deqen (德钦), post Shimianchangem (石棉厂), alt. 3400 m, prope rivulos sub sylvis in covallibus, 19 Jul. 1981, Exped. Qinghai-Xizang. (青藏队) 3600 (Holotypus PE).

本种与相仿苔草 *C. simulans* Clarke 接近, 但后者苞片短, 顶生小穗雄性, 侧生小穗圆柱形, 小坚果褐色, 可与本种区别。

密毛苔草 新种 图18

Carex hirticaulis P. C. Li, sp. nov.

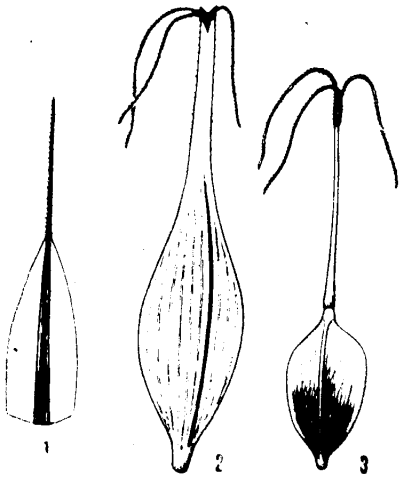


图17 云岭苔草 *Carex yunlingensis* P. C. Li,
1. 鳞片; 2. 果囊; 3. 小坚果。(吴彰桦绘)

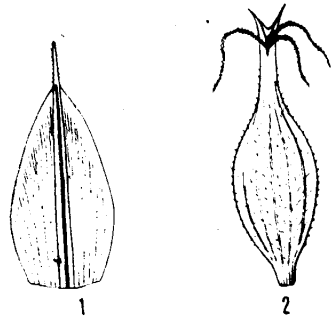


图18 密毛苔草 *Carex hirticaulis* P. C. Li,
1. 鳞片; 2. 果囊。(吴彰桦绘)

(Sect. *Hirtae*)

Affinis *C. drymophylae* Turcz. var. *abbreviatae* (Kükenth.) Ohwi, quae vaginis purpureis, bracteis inflorescentia superantibus, spiculis longioribus (6—7 mm longis) differt.

Rhizoma caespitosum. Culmus 35—45 cm altus gracilis dense hirtus basi vaginis aphyllis pallide brunneis obtectus. Folia culmo breviora 2—3 mm lata utrinque hirta longe vaginata, vaginae dense hirtae. Spiculae 4, superiores 2 ♂, approximatae cylindricae 2—4 cm longae, inferiore 2 ♀ remotae oblongo-cylindricae 2—2.8 cm longae 3—4 mm latae densiflorae summa subsessilis inferiore incluse pedunculatae erectae. Bractee foliaceae inflorescentis breviores hirtae superiores haud imo longe vaginantes. Squamae ♂ oblongae ferrugineae glabrae, ♀ ovato-lanceolatae 4 mm longae pallidae apice brunneae glabrae marginibus hyalinae, e carina viridi acuminato-aristatae. Utriculi squamas superantes elliptici 4—5.6 mm longi, subinflato-trigoni stramineo-virides hirti plurinervi, basi cuneati brevissime stipitati, apice in rostrum longum profunde bifurcatum sensim attenuati, crura divergentia. Nux juvenilis. Stylus validus basi aequalis Stigmata 3.

Yunnan (云南): Zhongdian (中甸), Xiaozhongdian (小中甸), Hongsa Silva Ager (红杉林场), alt. 3250 m, in pratis alpinis, 11 Jun. 1981, Exped. Qinhai-Xizang. (青藏队) 1043 (Holotypus PE).

本种与短柄林苔草 *C. drymophila* Turcz. var. *abbreviata* (Kükenth.) Ohwi 接近, 区别在于后者叶鞘紫色, 苞叶长于花序, 小穗较长 (长 6—7 毫米)。